DETAILED ACTION

Response to Amendment

1. The amendment filed on 11/1/2007 has been entered.

Specification

2. The disclosure is objected to because of the following: page 2 does not belong.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,328,077 to Mol in view of USPN 3,872,895 to Takada.

Regarding claims 1, 3, 4 and 8, Mol discloses a belting fabric comprising a plurality of adjacently disposed couplets of weft yarns forming an upper layer of weft yarns and a lower layer of weft yarns, a plurality of binder warp yarns, each binder warp yarn extending over at least one of the couplets of weft yarns in the upper layer and under at least two of said adjacently disposed couplets of weft yarns in the lower layer, and a straight middle warp yarn between the upper layer and the lower layers (see entire document).

Mol discloses that the middle warp yarn may be a "standard light denier yarn" but Mol does not appear to mention specific yarns. Mol is silent with regards to specific middle yarn materials, therefore, it would have been necessary and thus obvious to look to the prior art for conventional middle yarn materials. Takada provides this conventional teaching showing that it is known in the art to use inelastic core polyester yarns of low elongation to bear loads under tension without twisting or stretching (see entire document including column 4, lines 48-62 and column 5, lines 22-31). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the middle yarn from polyester yarns of low elongation, motivated by the expectation of successfully practicing the invention of Mol.

The substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); In re Ruff 118 USPQ 343 (CCPA 1958). When a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result. **KSR v. Teleflex**

Regarding claim 3, Takada discloses that the middle yarns may have a denier of at least 550 (column 5, lines 43-56).

Regarding claims 4 and 8, Takada discloses that the middle yarns may be set under tension (column 5, lines 22-31). Although Takada does not appear to mention heat, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a

product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter.

5. Claims 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,328,077 to Mol in view of USPN 3,872,895 to Takada as applied to claims 1, 3, 4 and 8 above, and further in view of anyone of USPN 3,650,879 to Munting or USPN 4,975,326 to Buyalos.

Regarding claims 2, 6 and 7, Takada discloses that it is known in the art to use inelastic middle polyester yarns of low elongation to bear loads under tension without twisting or stretching (see entire document including column 4, lines 48-62 and column 5, lines 22-31), but Takada does not appear to mention specific polyesters. Munting and Buyalos each disclose that it is known in the conveyor belt art to use PET fibers (see entire documents including column 1, lines 1-49 of Munting and column 1, lines 14-18 and column 2, lines 20-53 of Buyalos). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the polyester yarns from any suitable polyester material, such as PET, because PET has a low elongation at break and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claim 6, Takada discloses that the middle yarns may have a denier of at least 550 (column 5, lines 43-56).

Regarding claim 7, Takada discloses that the middle yarns may be set under tension (column 5, lines 22-31).

6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,328,077 to Mol in view of USPN 5,376,440 to Koseki.

Regarding claims 1 and 3, Mol discloses a belting fabric comprising a plurality of adjacently disposed couplets of weft yarns forming an upper layer of weft yarns and a lower layer of weft yarns, a plurality of binder warp yarns, each binder warp yarn extending over at least one of the couplets of weft yarns in the upper layer and under at least two of said adjacently disposed couplets of weft yarns in the lower layer, and a straight middle warp yarn between the upper layer and the lower layers (see entire document).

Mol discloses that the middle warp yarn may be a "standard light denier yarn" but Mol does not appear to mention specific yarns. Mol is silent with regards to specific middle yarn materials, therefore, it would have been necessary and thus obvious to look to the prior art for conventional middle yarn materials. Koseki provides this conventional teaching showing that it is known in the art to use inelastic core polyester yarns of low elongation to bear loads under tension without twisting or stretching (see entire document including column 3, lines 10-49). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the middle yarn from polyester yarns of low elongation, motivated by the expectation of successfully practicing the invention of Mol.

Regarding claim 3, Koseki discloses that the middle yarns may have a denier of at least 550 (column 3, lines 40-49).

7. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,328,077 to Mol in view of USPN 5,376,440 to Koseki as applied to claims 1 and 3 above, and further in view of anyone of USPN 3,650,879 to Munting or USPN 4,975,326 to Buyalos.

Regarding claims 2 and 6, Koseki discloses that it is known in the art to use inelastic middle polyester yarns of low elongation to bear loads under tension without twisting or stretching (see entire document including column 3, lines 10-49), but Koseki does not appear to mention specific polyesters. Munting and Buyalos each disclose that it is known in the conveyor belt art to use PET fibers (see entire documents including column 1, lines 1-49 of Munting and column 1, lines 14-18 and column 2, lines 20-53 of Buyalos). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the polyester yarns from any suitable polyester material, such as PET, because PET has a low elongation at break and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claim 6, Koseki discloses that the middle yarns may have a denier of at least 550 (column 3, lines 40-49).

8. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,328,077 to Mol in view of USPN 5,376,440 to Koseki as applied to claims 1 and 3 above, and further in view of USPN 3,872,895 to Takada.

Mol does not appear to mention tensioning the middle yarns, but Takada discloses that it is known in the art to tension the middle yarn of a belt (column 5, lines 22-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to tension the middle yarn, motivated by a desire to increase the tension response of the belt.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,328,077 to Mol in view of USPN 5,376,440 to Koseki in view of anyone of USPN 3,650,879 to Munting or USPN 4,975,326 to Buyalos as applied to claims 2 and 6 above, and further in view of USPN 3,872,895 to Takada.

Mol does not appear to mention tensioning the middle yarns, but Takada discloses that it is known in the art to tension the middle yarn of a belt (column 5, lines 22-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to tension the middle yarn, motivated by a desire to increase the tension response of the belt.

Response to Arguments

10. Applicant's arguments filed 11/1/2007 have been fully considered but they are not persuasive.

Regarding the specification, the applicant asserts that an error has not been located in the published application. The examiner directs the applicant to the bottom of page 1 of the current specification wherein page 1 ends referring to three monofilament wefts while page 2 begins referring to a controller that is manually operable. The current invention clearly does not relate to a controller or anything else on page 2. It is clear that page 2 of the current specification does not belong and that page 3 should directly follow page 1.

The applicant assert that the Takada fails to teach or suggest a middle warp yarn that is "effectively inelastic" because the middle warp yarn of Takada elongates a small amount prior to rupture. The examiner respectfully disagrees. The applicant is applying an improper standard to the term "effectively inelastic" wherein the material must possess zero elongation. "Effectively

inelastic" as know to one skilled in the art, and as interpreted in view of the current specification, means "low elongation."

The current specification discloses that the middle warp yarn is preferably formed of PET (page 4, line 31). According to www.answers.com, there are two primary types of polyester, PET and PCDT. PET is the more popular type and it is stronger than PCDT, while PCDT is "more elastic" than PET. Therefore, the preferred "effectively inelastic" material of the current invention is clearly elastic to some degree, albeit a low elongation.

It is further noted that Takada discloses that the middle warp yarn may be formed of polyester (column 4, lines 48-62). Considering that there are only two primary types of polyester (PET and PCDT), and considering that it is known to one skilled in the art that PCDT is more elastic than PET, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use PET as the middle warp yarn material motivated by a desire to follow Takada's direction to use a polyester material with low elongation. Upon the use of PET the prior art clearly teaches the claimed inelastic material because the current specification discloses that PET is inelastic.

The applicant also asserts that the middle yarn of Takada is not "effectively straight" because the yarn is twisted. The examiner respectfully disagrees. Firstly, the embodiment of Takada relied upon to reject the current claims (column 4, lines 48-62) does not require, or even mention, yarn that is twisted. Secondly, even if the filaments of the yarn are twisted, Takada clearly illustrates the overall yarn as being straight (Figure 2).

The applicant assert that the Koseki fails to teach or suggest a middle warp yarn that is "effectively inelastic" because the middle warp yarn of Koseki elongates a small amount prior to rupture. The examiner respectfully disagrees. The applicant is applying an improper standard to the term "effectively inelastic" wherein the material must possess zero elongation. The examiner contends that "effectively inelastic" as know to one skilled in the art, and as interpreted in view of the current specification, means "low elongation."

The current specification discloses that the middle warp yarn is preferably formed of PET (page 4, line 31). According to www.answers.com, there are two primary types of polyester, PET and PCDT. PET is the more popular type and it is stronger than PCDT, while PCDT is "more elastic" than PET. Therefore, the preferred "effectively inelastic" material of the current invention is clearly elastic to some degree, albeit a low elongation.

It is further noted that Koseki discloses that the middle warp yarn may be formed of polyester (column 3, lines 40-49). Considering that there are only two primary types of polyester (PET and PCDT), and considering that it is known to one skilled in the art that PCDT is more elastic than PET, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use PET as the middle warp yarn material motivated by a desire to follow Koseki's direction to use a polyester material with low elongation. Upon the use of PET the prior art clearly teaches the claimed inelastic material because the current specification discloses that PET is inelastic.

Regarding claims 4 and 8, the applicant also asserts that none of the references teach the claimed fabric because none of the references teach heat setting the warp yarns. The examiner respectfully disagrees. Takada discloses that the middle yarns may be set under tension (column

5, lines 22-31). Although Takada does not appear to mention heat, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew T Piziali/
Primary Examiner, Art Unit 1794